WHAT IS CLAIMED IS:

1. A method of generating a pattern recognition model, the method comprising:

introducing additive noise into a training signal, the additive noise being noise that is similar to noise that is anticipated to be present in a test signal during pattern recognition

applying at least one noise reduction technique to the training signal to produce pseudo-clean training data; and

constructing the pattern recognition model based on the pseudo-clean training data.

2. The method of claim 1 wherein applying at least one noise reduction technique comprises applying a plurality of noise reduction techniques.

3. The method of claim 1 wherein introducing additive noise into the training signal comprises introducing different types of noise to generate different sets of noisy training data, each set of noisy training data being associated with a different type of noise.

4. The method of claim 3 wherein applying at least one noise reduction technique comprises

applying the same noise reduction technique to all of the sets of noisy training data.

5. The method of claim 3 wherein applying at least one noise reduction technique comprises applying at least one noise reduction technique to one set of noisy training data that is not applied to any of the other sets of noisy training data.

6. The method of claim 5 further comprising a method of using the generated pattern recognition model to recognize a pattern, the method of using comprising:

receiving a test signal;

sampling noise in the test signal;

comparing the sampled noise from the test signal to noise sampled from the sets of noisy training data;

identifying the set of noisy training data that has noise that most closely matches the noise sampled from the test signal;

applying the noise reduction technique that was applied to the identified set of noisy training data to the test signal to produce pseudo-clean test data; and

applying the pseudo-clean test data to a pattern recognition model to identify a pattern in the test signal.

7. The method of claim 5 further comprising a method of using the generated pattern recognition model to recognize a pattern, the method of using comprising:

receiving a test signal;

creating at least two sets of pseudo-clean test data by applying at least two different noise reduction techniques to the test signal; and

applying each set of pseudo-clean test data to a pattern recognition model to identify a pattern in the test signal.

8. The method of claim 7 wherein applying at least one noise reduction technique to the training signal produces at least two sets of pseudo-clean training data and constructing the pattern recognition model comprises constructing a separate pattern recognition model for each set of pseudo-clean training data.

9. The method of claim 8 wherein the method of using the generated pattern recognition model further comprises:

applying each set of pseudo-clean test data to a separate pattern recognition model to identify a separate probability; and

selecting a probability from at least two separate probabilities to identify a pattern in the test signal.

10. The method of claim 1 further comprising a method of using the generated pattern recognition model to recognize a pattern, the method of using comprising:

receiving a test signal;

applying the at least one noise reduction technique to the test signal to produce pseudo-clean test data; and

applying the pseudo-clean test data to the pattern recognition model to identify a pattern in the test signal.

11. A pattern recognition model having model parameters consistent with a model that has been trained through a process comprising:

identifying a type of noise that is expected to be present in a test signal from which a pattern is to be recognized;

generating a training signal such that the training signal contains the identified type of noise;

reducing the noise in the training signal to produce training data; and

generating the model parameters based on the training data.

12. The pattern recognition model of claim 11 wherein generating a training signal comprises recording the training signal in a noisy environment that is similar to a noisy environment in which the test signal is expected to be generated.

13. The pattern recognition model of claim 11 where generating a training signal comprises recording a clean training signal in a clean environment and adding the identified type of noise to the clean training signal.

14. The pattern recognition model of claim 11 wherein identifying a type of noise comprises identifying multiple types of noise and wherein generating a training signal comprises generating multiple sets of training signals where each set contains a different type of identified noise.

15. The pattern recognition model of claim 14 wherein reducing the noise comprises applying the same noise reduction technique to each set of training signals.

16. The pattern recognition model of claim 14 wherein reducing the noise comprises applying different respective noise reduction techniques to the different sets of training signals.

17. A pattern recognition system for recognizing patterns in a test signal, the recognition system comprising:

a pattern recognition model having model parameters formed through a process comprising:

generating a training signal such that the training signal includes a type of noise that is anticipated to be present in the test signal;

reducing the noise in the training signal using a noise reduction technique to produce cleaned training values; and

using the cleaned training values to form the model parameters;

a noise reduction module being receptive of the test signal and being capable of applying the noise reduction technique to the test signal to produce cleaned test values; and

a decoder, receptive of features of the cleaned test values and capable of accessing the pattern recognition model to identify patterns in the test signal based on the cleaned test values.

18. The pattern recognition system of claim 17 wherein generating a training signal comprises

generating sets of training signals with each training signal set including a different type of noise.

19. The pattern recognition system of claim 18 wherein reducing the noise in the training signal comprises reducing the noise in each of the sets of training signals by applying the same noise reduction technique to each set of training signals.

20. The pattern recognition system of claim 18 wherein reducing the noise in the training signal comprises reducing the noise in each of the sets of training signals by applying a different respective noise reduction technique to each set of training signals.

21. The pattern recognition system of claim 20 wherein the noise reduction module further comprises:

a noise sampler that samples noise in the test signal;

a noise comparator that compares the noise sampled from the test signal to the noise in the sets of training signals and identifies a set of training signals that includes noise that best matches the noise sampled in the test signal; and

a noise reduction selector that selects and applies to the test signal a noise

reduction technique applied to the identified set of training signals.

22. The pattern recognition system of claim 17 further comprising:

a second pattern recognition model having second model parameters formed through a process comprising:

generating a second training signal such that the second training signal includes a second type of noise that is anticipated to be present in the test signal;

reducing the noise in the second training signal using a noise reduction technique to produce cleaned training values; and

using the cleaned training values to form the second model parameters.

23. The pattern recognition system of claim 22 wherein the decoder identifies patterns in the test signal by applying the features of the cleaned test values to the pattern recognition model and the second pattern recognition model.

24. The pattern recognition system of claim 23 wherein reducing the noise in the second training signal comprises using the same noise reduction

technique that was used to reduce the noise in the training signal.

25. The pattern recognition system of claim 23 wherein reducing the noise in the second training signal comprises using a different noise reduction technique than the one that was used to reduce the noise in the training signal.

26. The pattern recognition system of claim 23 wherein the decoder identifies a pattern by selecting between a pattern identified using the pattern recognition model and a pattern identified using the second pattern recognition model.

27. The pattern recognition system of claim 26 wherein the pattern recognition system is a speech recognition system and wherein the decoder selects between a string of words identified using the pattern recognition model and a string of words identified using the second pattern recognition model.

28. The pattern recognition system of claim 26 wherein the pattern recognition system is a speech recognition system and wherein the decoder selects between a word identified using the pattern recognition model and a word identified using the second pattern recognition model.

29. The pattern recognition system of claim 26 wherein the pattern recognition system is a speech recognition system and wherein the decoder selects between a sub-word acoustic unit identified using the pattern recognition model and a sub-word acoustic unit identified using the second pattern recognition model.